

## REMARKS

Claims 1-20 were pending in the application. In the Office Action dated May 9, 2005, all these claims were rejected under 35 USC § 102(e) as being anticipated by Wolfgang, et al. in U.S. Patent No. 6,625,295 B1.

Independent claims 1, 7, and 15, plus dependant claim 16, have been amended to include a “real time” requirement and that the . Additionally, claims 1-5, 7, 15-16, and 20 have been amended to correct informalities, especially in the form of antecedent basis.

It should first be noted that the “microthreads” the instant invention inserts into and detects in transmitted data differ from the “watermarks” utilized in the Wolfgang reference, esp. since the Wolfgang watermarks by necessity are included in much of, and preferably the entirety of, images.

Nevertheless, the Wolfgang reference does not insert its watermarks in real time. Rather, it inserts its watermarks into images. The “*watermarked original image*” 56 is then at some point transmitted. Indeed, it may be transmitted many times. And then later, the “*watermarked original image*” 56 is utilized for comparison with a received image. This is clearly not done in real time, and isn’t done for immediate, real time, transmission. (see FIG. 2 and associated discussion).

Contrast this with the present invention. For example, in the case of audio (radio) broadcasts, the live broadcast signal is dynamically modified in real time to include the microthreads, such as “*broadcast verification data*” (see ¶ 6). “*The microthread data can include data used to verify receipt of the carrier data, date and time stamp data, quality of transmission data (such as data that is used to determine whether the transmission quality meets minimum predetermined criteria), advertiser identification data, broadcaster identification data, transmitter identification data, or other suitable data*” (see ¶ 28). Much of this data cannot be inserted off-line, as is done in Wolfgang. It only makes sense when inserted real time as part of the transmission process.

It should be noted that both of the other two cited references, Shumann et al., U.S. Patent No. 6,285,774 and Ezaki et al., U.S. Patent No. 6,721,437 B1, appear to operate in a similar manner to Wolfgang, with “off line” and not “real time” watermark insertion. Indeed, Schumann is titled “*System and methodology for tracing to a source of unauthorized copying of prerecorded proprietary material, such as movies*”, which is strong indicia that the “*running marks*” it utilizes are

inserted off-line. And while the Ezaki reference at first glance (see FIG. 8, “*Electronic Watermark Embedding Section*”) appears from the drawings to show the embedding of watermarks in real time, there is no mention of how that could be done. Rather, the reference is devoted entirely to the “*reception side*”, leaving the “*transmission side*” to the prior art. And, indeed, the type of watermark being decoded by Ezaki is invariably decoded “off-line” and not in “real time” in the prior art.

Also, independent claim 15 was rejected as being the “*receive and recover/verify*” side of claim 7 and was thus rejected for the same reasons. However, the Wolfgang reference never decodes the inserted watermarks. Rather, it is a method of comparing the watermarks between two images that works by generating a “*watermark indicator*” (see Abstract, FIGs. 3, 4, 5) for each and comparing the two watermark indicators. This can be viewed simplistically of computing a hash function for both the original and the suspect image, and then comparing the two hash functions. If they are close enough together, you have copying, despite, for example, JPEG compression. But, most importantly here, the actual watermarks are never extracted in the Wolfgang reference- in real time or off-line. Instead, that reference teaches a method of bypassing watermark extraction. For that reason alone, applicant submits that rejection of this claim and its dependant claims was improper under 35 U.S.C. § 102(e).

The three independent claims (1, 7, 15) all include elements missing from the cited Wolfgang reference. Thus, applicant respectfully submits that the rejection of these claims under 35 U.S.C. § 102(e) is improper in view of the present claims, and requests that this rejection be withdrawn. Since the remaining claims are all dependant upon these three independent claims, Applicant further requests that the rejection of these claims under 35 U.S.C. § 102(e) also be withdrawn.

Applicant respectfully requests that this Amendment be entered. All claims should be allowable. Applicant further respectfully requests that a timely Notice of Allowance be issued in this case.

Date: 9/8/2005

Respectfully submitted,  
Jon Nash-Putnam

A handwritten signature in black ink, appearing to read "Bruce E. Hayden". The signature is fluid and cursive, with a large initial "B" and "H".

Bruce E. Hayden

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